

# Yottaa Site Optimizer Guide

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The Yottaa Site Optimizer automatically accelerates web sites and mobile apps, reducing page load times and improving your visitors' ability to interact with every page on your site. This document will guide you through all of the major features and functionalities of the optimization solution, ensuring you can complete a thorough evaluation within the trial period.

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# Introduction

You are reading this document because you care how your website performs. You know that your customers prefer a more responsive website. You also know that a faster website ranks higher on the search engines, which results in more visitors. Yottaa Site Optimizer, part of Yottaa's all-in-one web performance and security solution, automatically accelerates web sites and mobile apps. The result is a reduction in page load times and improvement in your visitors' ability to interact with every page on your site. And with Yottaa's QuickTune™ technology, you can customize your optimization settings to push site performance even further.

By the end of this document, you will have a complete view of the benefits offered by the Yottaa Site Optimizer. You will see how easy it is to create a new account with Yottaa. You will then learn how to test the benefits of the Optimizer without having to make any changes to your site. You will understand the different ways you can let the Optimizer interact with your website. When you are ready to let your end-users see the improvements to the site, you will learn how to implement the changes, either on your DNS services or by choosing to use Yottaa's global DNS infrastructure.

Then you will see how you setup SSL for your site and secure it from DDOS attacks or certain unwanted bots. You will learn what all the optimization settings mean and how to leverage them. Then you will see how to take your initial optimizations to the next level with Private Test, QuickTune, and the Yottaa Monitor.

Once you get past the first hands-on section, you can move around the document in almost any order. You can choose to skip certain sections entirely all depending on your particular needs. And if you run into any issues, you can always contact our Technical Support team, which is ready to help you out.

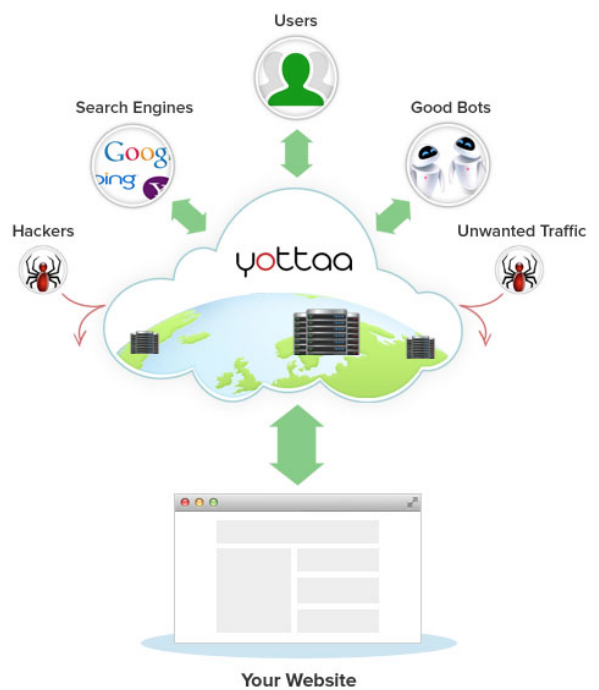
So let's get started by learning how the Yottaa Optimizer really works.

## How Yottaa Optimizer Works

One of the first questions everyone working with Yottaa asks is: "how does Yottaa optimize my site?" "Does Yottaa include a PHP component that needs to be installed on my webserver?" No. We do not require any physical access to your servers or infrastructure. At a high level, we act as a proxy to your website.

### What is a Proxy?

In the real world, a proxy is a person authorized to act on behalf of another. A proxy on the web is similar, often caching pages on its system because it may be faster at serving complete pages than the *origin server*. When dealing with proxies and caching, "origin server" is a term you will often hear. It simply refers to the



source of all the pages. In this case it's your webserver that generates the pages based on your needs. When a customer opens up a web browser and types in your URL, their browser will actually visit our servers in the cloud acting as a proxy for you. We have stored a copy of many of the html files and assets from your page on our servers and then optimized each of them. Whenever you make a change to the content on your site, we update the copies we are storing to ensure customers always see the latest information. And we do this around the world, allowing that content to be physically closer to your customer regardless of where they are.

## What is the Role of DNS?

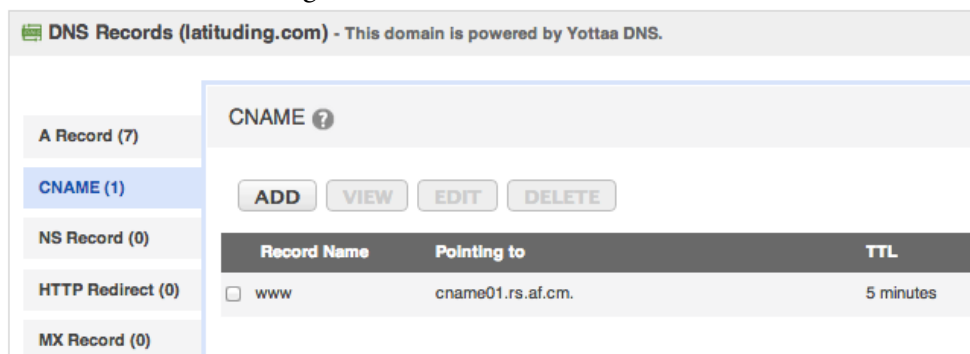
When you open a web browser, type a URL such as `www.google.com` into the location bar, and press Enter, the browser needs to figure out how to get to Google. It does this with the help of millions of DNS servers around the world. Basically your web browser asks its closest DNS server for an IP address corresponding to Google. If that DNS server doesn't know, it will ask another and then store the info locally for a while. It then tells your browser the IP address for `google.com`. The same process happens for every request your browser makes.

Since we are acting as a proxy to your site, the one change that has to be made to let your customers visit the optimized version of your site is updating your DNS records to point to us. But until you are ready you can actually delay this step, instead using a Yottaa CNAME.

## What is a CNAME?

DNS servers help applications such as web browsers find other servers on the Internet. These servers include web servers, mail servers, instant messaging servers and more. At Yottaa we are mostly concerned with the web servers. And the two types of records that deal with web servers are CNAMEs and *A* records.

*A* records store an IP address for a given subdomain, while CNAME records store an external



domain (a domain other than yours) for that subdomain. So for the domain `latituding.com`, I might have an *A* record for `latituding.com`, pointing to `66.216.67.35`, or a CNAME for `www` pointing to `cname.rs.af.cm` (as shown in the example above).

## DNS Options for Optimizer

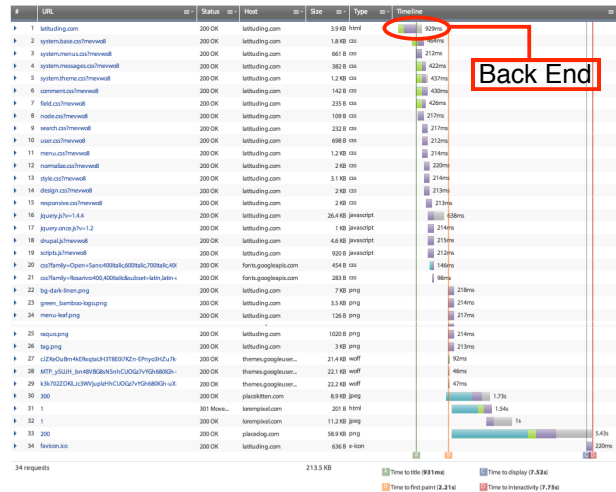
There are actually two main configurations when it comes to DNS and Yottaa Optimizer.

1. Point a CNAME record on your DNS server to the Yottaa URL – When you first configure Yottaa to optimize your site, we will generate a URL that points to the optimized version of your site. You can create a CNAME record on your DNS server which points to the Yottaa URL we create. If you use a www in front of your website’s URL, this may be a good option.
2. Migrate your DNS server to Yottaa’s Global IP Anycast DNS Service – If your users navigate to your root domain instead of www, you must use our DNS servers.

With this simple DNS change, we are able to act as an intelligent buffer to the front end of your website. We then analyze your site to see what can be optimized to improve its overall performance.

## What About Optimizing The Server-Side?

One of the key tools in a web performance engineer’s tool belt is the waterfall chart. You can find waterfall charts in your browser using the Chrome Developer Tools or Firefox Firebug, and we offer a more comprehensive waterfall in our Monitoring service as well. A waterfall chart lists all the assets in the order they were loaded and how long they took to download and process. You can very easily see where the bottlenecks are by looking for gaps and long lines. You can also very easily see where the back end stops and the front end starts. The back end has finished its job for the most part when it delivers the first HTML file. In the chart on the right you can see the small bar at the top and how it compares with the rest of the chart. You can see that the back end accounts for about 10-20% of the overall load time of the site. The rest of the time is spent downloading assets and processing them for display on the page.



# Step 1 - Create Your Yottaa Account & Add A New Site To Optimizer

## Section 1a – Follow this section if you are new to Yottaa and need to setup a new account

*Note: If you already have an account and wish to add a new site to Optimizer, skip ahead to Step 1a.*

The first step to using the Yottaa Site Optimizer is to create an account. The standard Yottaa account will allow you to test all of the features of the optimizer for a week. This should give you plenty of time to see how Yottaa can improve the overall performance of your website.

- 1) Open your web browser and navigate to <http://www.yottaa.com>.
- 2) Click on one of the **Sign Up** or **Try It** buttons on the home page.  or 
- 3) Fill in the details accordingly. For the purposes of this guide, it's best if you use the www subdomain for your site. For instance, if I want to test [latituding.com](http://www.latituding.com), I would type [www.latituding.com](http://www.latituding.com). When done, click the **Get Started** button.

At this point skip ahead to **Section 2** on the next page.

## Section 1b – Follow this section if you have a Yottaa account already and just want to add a new site

- 1) Choose the **Site Optimizer** tab near the top of the window.
- 2) Click the **Add Site** button below the tabs.
- 3) Enter the site you wish to add in the text box provided.

At this point continue ahead to **Section 2** on the next page.

## Section 2

Within a few moments you will see our Site Performance Assessment which will continue to update as we collect more information about your site. This page shows a summary of what we have found in our initial look at your site. Scroll down and take a look at all the information. You will probably also find a new email in your Inbox from us letting you know that Optimizer has been configured.

Site Performance Assessment Activate Yottaa Optimizer

We recommend you reduce content complexity and [try Optimizer](#). RE-RUN THE TEST

### SPEED

**WWW.LATTUDING.COM** - Time to Interact:

- 5.3 seconds to load from Singapore
- 6.1 seconds to load from Washington, DC
- 2.1 seconds to load from San Francisco
- 2.7 seconds to load from Dublin

This places you in the **35th percentile** of all websites (i.e., you are faster than **35%** of sites around the world).

Did you know a 100ms delay for Amazon.com causes a 1% drop in revenue?

### CONTENT COMPLEXITY

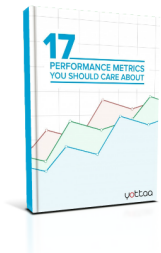
**Content Metrics for WWW.LATTUDING.COM**

- Total size of page: **176 KB** (better than 24% of websites)
- Number of requests: **34** (better than 13% of websites)
- Number of images: **8** (better than 50% of websites)
- Number of JavaScript files: **4** (better than 60% of websites)
- Number of CSS files: **18** (better than 15% of websites)
- Number of 3rd party components: **9** from 5 domains

Did you know that doubling the number of page assets can increase page load times 50-100%?

After the assessment is complete, you will see a video comparison at the top of the page. The video on the left is your original site and the video on the right is our optimized version. Click the play button to see which is faster using the default options.

The first section in the assessment below the video is about speed: How fast does your site get to the Time To Interact measurement? Time to Interact is reached when the end user can work with your site, typing into a text box for instance (you can read more about the Time to Interact in the [17 Performance Metrics You Should Care About](http://www.yottaa.com/17-user-experience-and-site-performance-metrics-you-should-care-about-ebook/) (<http://www.yottaa.com/17-user-experience-and-site-performance-metrics-you-should-care-about-ebook/>) eBook).



The second section is Content Complexity. In most cases you want your site to be as interesting and engaging as possible, but should do it with a limited number of assets. This section describes how large the overall download is and how many files of different types have to be downloaded. You can also see which other domains your site relies upon.

## Step 2 - Configure DNS

After completing the previous section, Yottaa has optimized your site but it's not yet accessible to your customers. In order for your customers to see the optimized version, you need to make one of two changes to how your DNS is resolved.

If you remember from the How Yottaa Optimizer Works section above, there are two main options for setting up DNS. Either you create a CNAME record on your DNS server pointing to the URL we generate at Yottaa, or you migrate to the Yottaa DNS. Yottaa's DNS is designed for extremely quick DNS resolution around the world and in most cases will resolve names much more quickly than other options. But you don't have to use the Yottaa DNS as long as you are using a subdomain, such as www, to access your site.

In order to complete either of these two sections, you will need to know where your DNS is hosted. If you don't know, you can use a service like <http://who.is>. Enter your URL in the search box and you will see your registrar info and a pointer to the DNS servers.

Unless you have actively changed the DNS servers, your registrar will probably manage them. You might see names like GoDaddy, Gandi, Network Solutions, or others here. We cannot list out the instructions for every DNS service, but the general process should be the same regardless of the service used. Also, the most popular services such as GoDaddy change their interfaces often. The specific instructions shown here are accurate as of December 2012.

### Option 1 - Add a CNAME Record to Your DNS

In this section, we will add a CNAME record to your DNS service.

*There are thousands of Domain Name Registrars on the Internet and it is impossible to provide instructions for all of them. Instructions have been provided for four different providers for your convenience: GoDaddy (the #1 registrar with over 30% of all domains), Network Solutions (#4, the original registrar which has 6% of domains), 1and1 (#5, a German registrar which has nearly 5% of all domains) and Gandi (#26, a French registrar with about 1% of domains)*

- 1) Log in to your DNS provider's management interface. Navigate to the Zone editor.
  - a. GoDaddy – Login to GoDaddy, Click on **My Account** at the top right. Click the **Plus (+)** sign next to Domains. Click the **Launch** button to open the Domain Management. Under the heading DNS Manager, click the **Launch** link.
  - b. Network Solutions – Click on Manage Account and Login. Select the domain you want to edit from the drop down and click the **Go** button. In the small print, click the link to **Edit Advanced DNS Records**.
  - c. 1and1 – Login to the 1and1 Control Panel. Click on **Domains**.
  - d. Gandi – Login to the management interface. Click the domain you want to manage. Click on the **See the Zone** link near the bottom right. In order to make any changes, you must copy the



zone file (this makes it very easy to roll back). Click **Copy the Zone** and enter a name for the new active zone. Click the **Create New Version** button.

- 2) The Zone editor will show all of the DNS records for your domain. Turn to the end of this document and write out the records on the last page. You may also be able to export the records to a file on your computer. This information will be useful if you choose to disable Yottaa at some point in the future.
- 3) If you have an A record or CNAME for **www** and/or **@**, delete or disable it.
- 4) Open a new browser window and login to your Yottaa account.
- 5) Switch to the **Site Optimizer** tab. You will probably see the Assessment of your site again.
- 6) Click the **Activate Yottaa Optimizer** button.
- 7) Choose the middle option, **Add a CNAME to activate Yottaa**, and click **Next**.

*If you only see two options: **I am not familiar with DNS...**, and **Activate Yottaa DNS for my domain**, skip ahead to Option 2 – Use Yottaa for DNS below.*

- 8) Click the **Copy to Clipboard** button.
- 9) Add CNAME record to your DNS service using the information provided.
  - a. GoDaddy
    - i. Under the CNAME section, click the **Quick Add** button.
    - ii. Type **www** for the *Host* field and paste the CNAME record into the *Points To* field.
    - iii. Choose the shortest TTL value of ½ hour.
    - iv. Click **Save Zone File**, then **OK** to accept the changes.
  - b. Network Solutions
    - i. Under the CNAME section, click the **Edit CNAME Records** button.
    - ii. Type **www** in the *Alias* field.
    - iii. Choose the shortest TTL value of 3600 (60 minutes).
    - iv. Click the radio button for *Other Host* and paste the CNAME record into the *Other Host* textbox.
    - v. Click the **Continue** button. Finally click **Save Changes**.
  - c. 1and1.com
    - i. Choose **Create Sub-Domain** under the **New** button.
    - ii. Type **www** in the textbox and choose the domain in the dropdown.
    - iii. Click **OK**.
    - iv. Check the name you just created. Under the **DNS** button, choose **Edit DNS Settings**.
    - v. Click the radio button for CNAME.
    - vi. Paste the CNAME record into the *Alias* textbox.
    - vii. Check the *Confirmation* textbox and click **OK**.
  - d. Gandi.net
    - i. Click the **Add** button.
    - ii. Choose **CNAME** for the Type.
    - iii. Type a TTL value of **5** minutes.
    - iv. Type **www** for the *Name* and paste the CNAME into *Value*. Add a period or dot (.) to the end of the value.
    - v. Click the **Activate This Version** button to activate the updated Zone.
- 10) Return to the Yottaa page and click **Finish**.



*You will probably see a status of Waiting. Changing the DNS can take a few hours. Depending on the DNS service used, it can take anywhere between 5 minutes and 48 hours. When writing this guide using GoDaddy, it took less than 5 minutes.*

- 11) Click the button on the right to check again. If it still says Waiting, then take a break and try again soon.

## Option 2 - Use Yottaa for DNS

In this section we will change your Domain to use Yottaa DNS instead of whichever service you are currently using. In the Create an Account section, we used the www subdomain. If you would prefer to optimize the root domain then start from step 1. Otherwise to optimize the www subdomain using Yottaa DNS, then skip forward to step 5.

*The first 4 steps should only be followed if you want to optimize your root domain.*

- 1) Login to your Yottaa account.
- 2) Click on the **Overview** tab. Ensure that the domain you are working with is selected.
- 3) Click the **Delete this site** button. Click **OK** to confirm.
- 4) On the blue bar at the top of the window, choose **Add Site** from the Add dropdown. Type the URL for the root domain and click **OK**.

*If you do not need to optimize your root domain, you can start here.*

- 5) Log in to your DNS provider's management interface. Navigate to the Zone editor.
  - a. GoDaddy
    - i. Login to GoDaddy.
    - ii. Click on **My Account** at the top right.
    - iii. Click the **Plus (+)** sign next to Domains.
    - iv. Click the **Launch** button to open the Domain Management.
    - v. Under the heading **DNS Manager**, click the **Launch** link.
  - b. Network Solutions
    - i. Click on Manage Account and Login.
    - ii. Select the domain you want to edit from the drop down and click the **Go** button.
    - iii. In the small print, click the link to **Edit Advanced DNS Records**.
  - c. 1and1.com
    - i. From the 1and1 Control Panel, click on Domains.
  - d. Gandi.net
    - i. Login to the management interface.
    - ii. Click the domain you want to manage.
    - iii. Click on the **See the Zone** link near the bottom right.
- 6) The Zone editor will show all of the DNS records for your domain. Turn to the end of this document and write out the records on the last page. You might also be able to export the records to a file on your computer. This information will be useful if you choose to disable Yottaa at some point in the future.
- 7) Open a new browser window and login to your Yottaa account.

- 8) Click the **Activate Yottaa Optimizer** button.
- 9) Choose **Activate Yottaa DNS** for my domain and click **Next**.
- 10) Compare the records shown here to the records you wrote down on the last page of this document.
- 11) If there are any missing records in what we collected, create them in the Yottaa interface.
- 12) Change the TTL values for the records related to your web site to 5 minutes.
- 13) Click **Next** to continue.
- 14) Configure your registrar to point to Yottaa's DNS instead of whichever DNS you are using.
  - a. GoDaddy
    - i. Login to GoDaddy.
    - ii. Click on **My Account** at the top right.
    - iii. Click the **Plus (+)** sign next to Domains.
    - iv. Click the **Launch** button to open the Domain Management.
    - v. Under the heading **Nameservers**, click the **Set Nameservers** link.
    - vi. Click the Add More link.
    - vii. Add the 6 nameservers displayed in the Yottaa interface into Nameserver 1-6.
    - viii. Click **OK** and **OK**.
  - b. Network Solutions
    - i. Login to Network Solutions
    - ii. Click on **Manage Account**.
    - iii. Choose the domain you want to modify and click **Go**.
    - iv. Click **Change Where Domain Points**.
    - v. Choose the second option, pointing to another DNS. Click **Continue**.
    - vi. Add the 6 nameservers displayed in the Yottaa interface into Name Server 1-6.
    - vii. Click **Continue**.
  - c. 1and1.com
    - i. Login to the 1and1 Control Panel.
    - ii. Click on Domains.
    - iii. If you have any subdomains you will need to remove them before you can assign Yottaa to the name servers.
    - iv. Check the domain you want to modify and click **Show DNS Settings** under **DNS**.
    - v. Click the Edit button.
    - vi. Choose **My name server** from the Name server dropdown.
    - vii. Add the 6 nameservers displayed in the Yottaa interface into the appropriate textboxes.
    - viii. Click OK.
  - d. Gandi.net
    - i. Login to Gandi.net
    - ii. Click the domain you want to modify.
    - iii. Under Name servers, click **Modify servers**.
    - iv. Change DNS1-6 to the 6 nameservers displayed in the Yottaa interface.
    - v. Click **Submit**.
- 15) Return to Yottaa and click **Finish**.

16) After a few minutes, click on Check it now.

*The amount of time required for this step can be anywhere between 5 minutes and 48 hours depending on a range of factors including the existing TTL set on your DNS service. We default to a 5-minute TTL so rolling back to your previous DNS service should be much quicker, if you should ever need to do so.*

## **Congratulations! Your website is now optimized on Yottaa!**

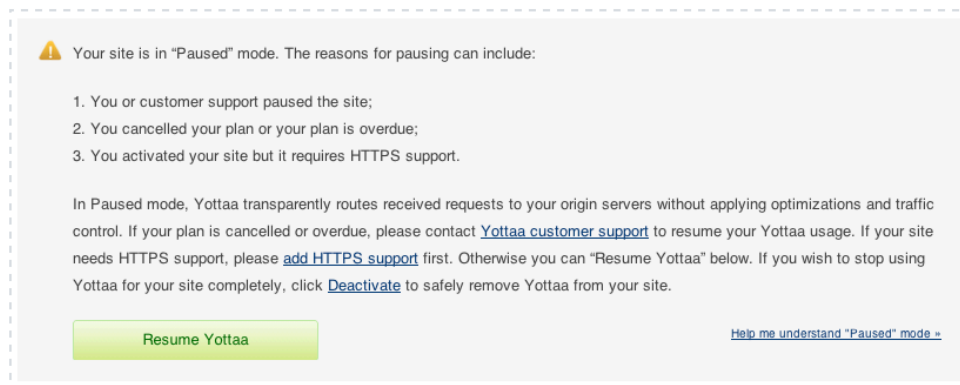
If you are using SSL certificates on your website, read the next section to get that configured. Otherwise you can skip ahead to learn about optimization options.


## Step 3 (Optional) - Setup SSL Certificates

If your website is an eCommerce site, you probably have an SSL certificate that combines your site's identity with its public key, signed by a certificate authority such as GlobalSign or another vendor. This certificate is used by a customer's browser to read the encrypted conversation it has with your webserver. Your customer sees the normal website while any hackers in between see only encrypted data. Since a certificate is created with the identity of the webserver in mind and that webserver looks different with Yottaa running in front of it, your existing certificate cannot be used as is with a Yottaa-optimized website. Creating a new certificate with Yottaa is very easy to do and for most sites we will even initiate the process automatically.

In this exercise you will see how to implement an SSL certificate for a Yottaa-optimized website.

- 1) After you have configured DNS to point to Yottaa for your site, the Optimizer Overview page will show one of two sets of information. If you see two pie charts and a graph of Request Trending, then your site is up and running. If you see the site is Paused then we probably identified the site as using SSL and you need to configure the certificate before it can continue. If your site is currently running and you would like to configure an SSL certificate, click the **Pause Yottaa** button.



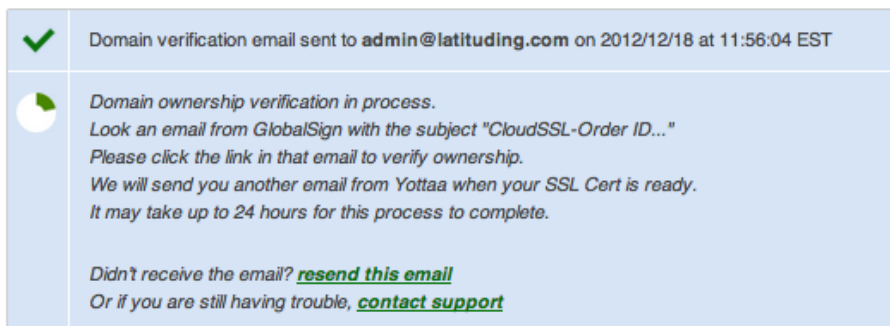
 Your site is in "Paused" mode. The reasons for pausing can include:


1. You or customer support paused the site;
2. You cancelled your plan or your plan is overdue;
3. You activated your site but it requires HTTPS support.


In Paused mode, Yottaa transparently routes received requests to your origin servers without applying optimizations and traffic control. If your plan is cancelled or overdue, please contact [Yottaa customer support](#) to resume your Yottaa usage. If your site needs HTTPS support, please [add HTTPS support](#) first. Otherwise you can "Resume Yottaa" below. If you wish to stop using Yottaa for your site completely, click [Deactivate](#) to safely remove Yottaa from your site.

[Resume Yottaa](#) [Help me understand "Paused" mode >](#)

- 2) In the Paused explanation dialog, click the **add HTTPS support** link.
- 3) To confirm that you are authorized to manage this domain, we need to send an email to the addresses listed in the WHOIS record for your domain. Choose an address and click **Send Verification Email**.

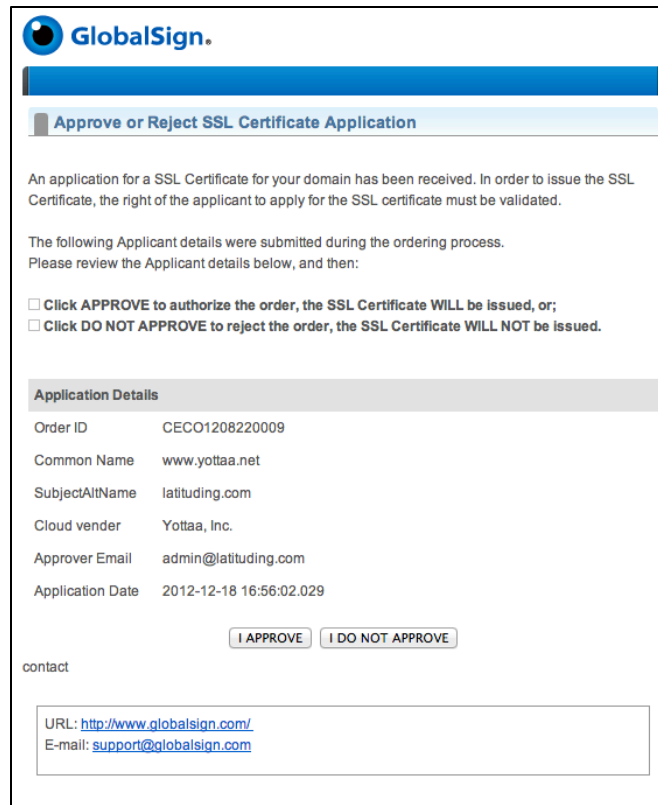


 Domain verification email sent to [admin@latituding.com](mailto:admin@latituding.com) on 2012/12/18 at 11:56:04 EST

 Domain ownership verification in process.  
*Look an email from GlobalSign with the subject "CloudSSL-Order ID..."  
Please click the link in that email to verify ownership.  
We will send you another email from Yottaa when your SSL Cert is ready.  
It may take up to 24 hours for this process to complete.*

*Didn't receive the email? [resend this email](#)  
Or if you are still having trouble, [contact support](#)*

- 4) Open your email. You should see a message from [approval@globalsign.com](mailto:approval@globalsign.com). In that email you will see a long link that starts with <https://regist.globalsign.com>... Click that link to continue.
- 5) This will take you to an approval screen similar to the one shown here.
- 6) Click the **I APPROVE** button



**GlobalSign.**

**Approve or Reject SSL Certificate Application**

An application for a SSL Certificate for your domain has been received. In order to issue the SSL Certificate, the right of the applicant to apply for the SSL certificate must be validated.

The following Applicant details were submitted during the ordering process.  
Please review the Applicant details below, and then:

Click **APPROVE** to authorize the order, the SSL Certificate **WILL** be issued, or;  
 Click **DO NOT APPROVE** to reject the order, the SSL Certificate **WILL NOT** be issued.

**Application Details**

Order ID	CECO1208220009
Common Name	www.yottaa.net
SubjectAltName	latituding.com
Cloud vender	Yottaa, Inc.
Approver Email	admin@latituding.com
Application Date	2012-12-18 16:56:02.029

contact

URL: <http://www.globalsign.com/>  
E-mail: [support@globalsign.com](mailto:support@globalsign.com)

*Those items that look like checkboxes are not checkboxes.*

- 7) At this point Yottaa needs to process your SSL certificate to make it available to you site. This will take up to 24 hours.
- 8) When the certificate is deployed, click the **Go to site overview button**.
- 9) Resume the site by clicking on the **Resume Yottaa** button.

Although this process can be completed without any assistance, please feel free to contact Yottaa at any time if you have questions about the process.

## Step 4 - Verify Your Website

At this point, your site is online and ready to go. We have optimized the site; you setup the DNS and SSL as well. Its important at this point to ensure that everything works as it should before many of your customers have a change to visit. If you encounter any issues, don't worry, there is an easy way to handle this.

- 1) Open your newly improved site in your web browser.
- 2) Login as a typical user and navigate the site as they would.
- 3) Add an item to the shopping cart and complete the checkout process.
- 4) Login as an administrator. If this is a blog, create a test entry. If this is an eCommerce site, add an item to the store.

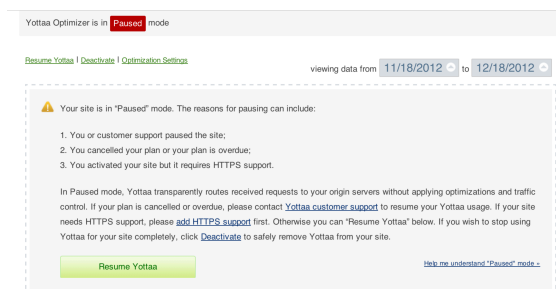
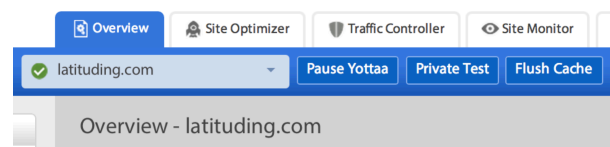
*If you discover any problems with your site, you can always click the Pause Yottaa button. Pausing will pass through all requests to your original site. See **Section 5 – Pausing a Site** for more details.*

*You can then either troubleshoot the issue yourself or contact our Support team to help walk through creating the right exceptions for your site.*

## Step 5 (Optional) - Pausing a Site

If you make any changes to your website that ends up causing issues, you can always pause the site. Pausing a site basically takes the Yottaa optimized version offline. Any requests to your site will still pass to Yottaa because the DNS is configured to do so. But Yottaa will immediately pass through those requests to your origin server. When you want to re-enable the optimized version, simply resume the site. It is worth noting however that resuming will force the cache on the Yottaa servers to be flushed. This will only cause a minimal delay (usually less than 1 second) for the first visitor in each location.

- 1) Login to the Yottaa website.
- 2) Switch to the Site Optimizer tab.
- 3) On the toolbar below the Site Optimizer tab, click on the Pause button.
- 4) If you followed the previous section, open the test page you created from a browser on a different machine. Notice that the bad asset is no longer being blocked. If you **Resume Yottaa**, the asset will be blocked.
- 5) When you pause a site, you will see a dialog stating that the site is paused.



## Step 6 (Optional) - Optimization Options

When we optimize your website, we make it as fast as possible without causing any unexpected issues. You can take that initial configuration and tweak it in a number of ways to make it even faster. This section covers the different options available for you to change.

### Optimizer Settings Overview

The Overview page shows you at a high level how your site is performing with Yottaa optimizing the front-end. You can see two pie charts which show how much traffic and how many requests have been offloaded from your origin servers. Below that is a trending chart showing those figures over time. If you see any numbers on the trending line chart, click the sideways chevron on the top right corner of the chart. This will expand a sidebar. This sidebar lists the configuration events that occurred at every point on the chart that has a number next to it. As you work with the site over time, seeing how the configuration changes you make affect the site is very useful.



### Content Optimization

- Parallelize Requests
- Reduce CSS Requests
- Reduce Javascript Requests
- Domain Sharding
- Reduce Image Requests
- Reduce Download Size
- Minify CSS
- Minify Javascript
- Optimize Images

Content Optimization is where most of the modifications can be done. All of the options here affect the assets included in the HTML file. Each section includes a description of what is enabled and the impact of making any changes. If there are any dependencies, they will be listed here as well. You can also define exceptions to each setting. Each exception can be defined based on a URL that is identified as an exact match, using a regular expression, or as containing the specified string. Most exceptions can then be further narrowed down by client user agent, or request or response header. To get these extra options, click the green plus sign to the right of the request URL textbox. Note that an exception can either be a special configuration to **include** or **exclude**. Read through the different options to get a full description of what is possible.

### CDN & Cache Control

You can configure the HTML and Assets differently with regards to caching. By default we will respect the existing HTTP headers that deal with caching. Sometimes the web host you use will set the content to not allow caching. You may or may not have control over this. You can configure Yottaa to override these settings for assets by creating an exception. For the HTML page, you can set the options on the HTML Caching page without creating an exception.

### Domain & Origin Server

Many web sites leverage resources from other domains. Latituding.com's test blog posts use image placeholders that are generated by placedog.com, placekitten.com, and lorempixel.com. These are great tools for generating placeholder images, but they are fairly slow. By adding them to the Resource Domains list, Yottaa will optimize the performance of those assets as well. After adding

those three domains and making no other changes, Latituding.com's load time improved from 10-11 seconds down to less than 1 second.

## Step 7 (Optional) - Setup a Monitor For Your Optimized Site

After optimizing your site, its important to monitor the site to ensure that performance is consistent over time. Monitoring also lets you see if the site encounters any issues. We will notify you via email or SMS if that happens so that you have a chance to deal with the issue, hopefully before any customers notice.

In this exercise you will create a monitor for your newly optimized website and discover the major features of the Yottaa Site Monitor.

- 1) Click on the **Site Monitor** tab.
- 2) Click the **New** button to add a new monitor.
- 3) Give the monitor a name, enter the URL and change the Monitor Type to one of the browsers.
- 4) Change the Frequency to **8 hr**.

*The Optimizer evaluation account allows for 120 browser samples per month, which comes out to about 1 sample per 8 hours. If you have a higher level Monitor account, you can set this frequency much higher.*

- 5) Switch to the **Location & Connectivity Options** tab. Select the locations you want to monitor from.

What would you like to monitor? **Location & Connectivity Options** Issue Definitions Advanced

Location:

<input type="checkbox"/> North America	<input type="checkbox"/> Europe	<input type="checkbox"/> Asia	<input type="checkbox"/> Others
<input type="checkbox"/> Chicago (ORD)	<input type="checkbox"/> Berlin (BER)	<input type="checkbox"/> Hong Kong (HK)	<input type="checkbox"/> Sao Paulo (SAO)
<input type="checkbox"/> Dallas (DFW)	<input type="checkbox"/> Dublin (DUB)	<input type="checkbox"/> Singapore (SGP)	
<input type="checkbox"/> Miami (MIA)	<input type="checkbox"/> London (LDN)	<input type="checkbox"/> Tokyo (NRT)	
<input type="checkbox"/> Oregon (PDX)			
<input checked="" type="checkbox"/> San Francisco (SFO)			
<input type="checkbox"/> Washington DC (DCA)			

Last Mile Connectivity: Default (6mbps to 44mbps, latency: 4ms)

*The locations will be monitored in a round-robin fashion, one location every frequency period defined above. If you have the evaluation account, it may be best to choose a single location only.*

- 6) Switch to the **Issue Definitions** tab.
- 7) Check the checkbox for **Network performance issue** and click the **Enable** button.
- 8) On the Network performance issue line, set Time to last byte to  $\geq 1$  Second.
- 9) Click the **Add** button and look at the other issues you can define. Try a few out.
- 10) Switch to the **Advanced** tab.

*From the Advanced tab you can define login credentials, cookies, and other headers to use in case your page requires them.*

- 11) Click the **Save** button.



After a few moments the page will refresh with your first browser sample.

The Monitor Summary page shows you at a glance how your page is performing. The page is split into 6 main sections.

1) **Monitor Overview**

2) **Yottaa Score**

A single number based on a wide variety of metrics collected (averaged over all samples collected so far)

3) **Summary of Key Metrics**

The key metrics used to determine the overall performance of the page from both a front-end and back-end perspective (averaged over all samples collected so far)

4) **Most Recent Issues**

Issues collected from all locations being monitored

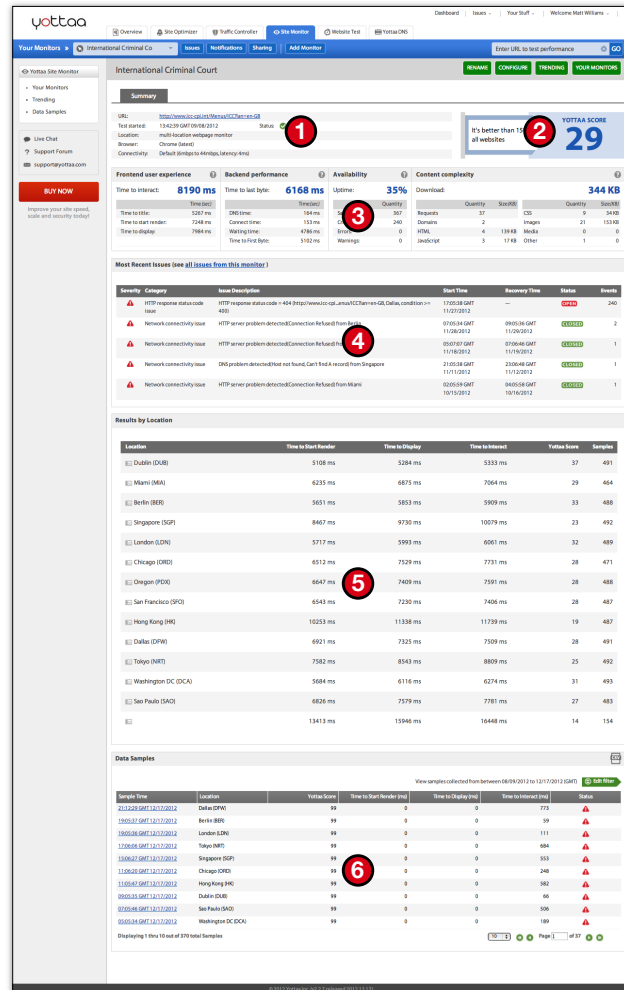
5) **Summary By Location**

Displays Time to Start Render, Time to Display, Time to Interact, and Yottaa Score, averaged for each location.

6) **Most Recent Samples**

10 most recent samples collected across all locations.

Each section can be drilled into further to get more details. Take a look around and discover the features available.



## Step 8 (Optional) - QuickTune & Private Test

QuickTune and Private Test are two incredibly valuable features of the Yottaa Site Optimizer. QuickTune will provide an easy process to take the information you learn from a Monitor or Test, and quickly use that information to improve on the performance of the site. QuickTune combines optimization, testing, and visual analysis features that, for the first time, put high-end web performance optimization capabilities in the hands of any web team. Private Test allows you to make changes with QuickTune without impacting end users until you are sure that everything works as expected.

In this exercise you will put your site into Private Test mode, use QuickTune to optimize the site, and then accept the changes when you leave Private Test.

- 1) Create a page on your site with some dummy text, at least one valid picture, and one invalid picture. Here is some sample html which will be perfect for our purposes (but remember to insert a lot more text to make it interesting):

**Sample text.**

```
<!-- This image doesn't exist -->
```

```

```

```
<!-- This image exists -->
```

```
<br>
```

feel. That makes me feel angry! Check it out, y'all. Everyone who was invited is



### Godfellas

What's with you kids? Every other day it's food, food, food. Alright, I'll get you s food. Goodbye, friends. I never thought I'd die like this. But I always really hop on the top. I just told you! You've killed me! Just once I'd like to eat dinner with who isn't bound and gagged. Is the Space Pope reptilian?>



*Ideally your page will look something like this with some text, a random image, and an ugly icon indicating that one of the images couldn't be found.*

*Since our Monitor has been configured for the home page, we will create a Test for this new page.*

- 2) Switch to the **Website Test** tab and click the **New** button.
- 3) Enter the URL of the page you just created in step 1.
- 4) Choose to perform a **Single browser, location and connectivity test** and click **Run Test**.

*Wait a few moments for the test results to appear.*

- 5) Click the link for the single data sample.
- 6) Scroll down to the Waterfall chart. Look for the item with a status of **404 Not Found**. Click on that item.

The screenshot shows a waterfall chart with two items:

15	menu.css:YSDU.css?mewwo8	200 OK	cdn-us.yottaa.net	1 KB	css	11ms
16	blah.jpg	404 Not Found	cdn-us.yottaa.net	172 B	html	

Below the chart, there are buttons for **OPTIMIZE** and **TEST**. The request details for item #16 are shown below:

Overview	Request Headers	Response Headers	
Status Code:	404	Start Offset:	+568ms
Host:	cdn-us.yottaa.net	DNS Lookup:	0
Request Method:	GET	Connecting Time:	0
IP:	72.21.91.87	Blocking Time:	2ms
Location:	n/a	Sending Time:	0
		Waiting Time:	378ms
Bytes In (downloaded):	172 B	Time to First Byte:	380ms
Bytes Out (uploaded):	n/a	Time to Last Byte:	380ms

Because Yottaa is optimizing your site, you see an **Optimize** button which will let you create a QuickTune rule.

- 7) Click **Optimize**.
- 8) For Rule name, type: **Remove Bad Assets**.
- 9) Choose **Document rule**.
- 10) From Rule actions, check **Bad Asset Removal**.
- 11) Change the dropdown for Rule conditions to **contains** and type the root domain of your website.

*My test page is <http://latituding.com/node/5> so I would type <http://latituding.com> in the Rule Conditions textbox. Selecting contains instead of matches allows you to remove the bad asset regardless of the page the asset is on.*

- 12) Click **Next**.
- 13) The assets to be removed are listed. Click **Done**.

*Yottaa is now implementing this new QuickTune rule. Wait a few moments for this step to complete.*

- 14) In another browser tab or window, visit the test page you created. Check to see if the bad image is still showing. If it is, the page may be in your cache. Refresh a few times to ensure that you are obtaining the fresh version of the page. Or open the page in a different browser or on a different machine.

*Notice that the change was made immediately. If the change you made had a negative impact on the site, your customers might complain about it. So it is best to test the changes privately before rolling out the changes to everyone.*

is brilliant! Your lyrics lack subtlety. You can't just have your characters announce how the feel. That makes me feel angry! Check it out, y'all. Everyone who was invited is here.

### Godfellas

What's with you kids? Every other day it's food, food, food. Alright, I'll get you some stupid food. Goodbye, friends. I never thought I'd die like this. But I always really hoped. No. We' on the top. I just told you! You've killed me! Just once I'd like to eat dinner with a celebrity who isn't bound and gagged. Is the Space Pope reptilian?



- 15) Back in the Yottaa site, switch to the **Site Optimizer** tab and make sure the site we are optimizing is selected from the dropdown.

- 16) Click on the **Private Test** button. Click the YES, **Launch Private Test Session** button.  
*This enables you to work on a private version of your website. Any changes you make will not be seen by customers until you decide to make the changes public.*
- 17) On the left sidebar, click the **QuickTune Wizard** link. Click the **Go** button to run a test.
- 18) Select an asset and then optimize it using one of the QuickTune rules. Some examples include picking a Javascript file and choosing to load it asynchronously, or picking an image and choosing to make it responsive, loading only after the user scrolls down to that image. Click different types of assets to see what's available from the QuickTune Wizard.
- 19) After implementing a rule, try opening the website on another browser or a browser on a different machine. Notice that no changes have been made.
- 20) Return to the **Site Optimizer** tab with your site in the dropdown.
- 21) Click the **in Private Test** button and choose to browse the site. Notice the changes you made have been implemented.
- 22) Now from the **in Private Test** button, choose **Exit Private Test**.
- 23) You have three choices available: Continue, Apply, or Discard.
- 24) If you chose to Apply, you can click on **QuickTune Rules** on the left sidebar, find the rule you just created and delete it to roll back to the previous state.

# Troubleshooting

We have gone to great lengths to ensure that most customers never have any issues with the Yottaa service. If you do run into a problem, this section will go over the common resolutions. If you need any help, please contact our Technical Support team.

## Major Issues

If you are running into major issues with your site, such as errors, lost functionality, etc., click the Pause Site button at any time. This will effectively turn us into a transparent proxy, forwarding all requests to your origin server, bypassing Yottaa. To find out more about Pausing a Site, refer back to Step 5 – Pausing a Site.

## Update Site Content

When you update the content on a site, you may find that customers are still seeing the previous version of the information. This is due to our cache of your content still being used. The cache will be flushed automatically when the end of its Time to Live (TTL) has been reached. To flush the cache earlier, click the **Flush All Caches** button near the top of the window under the Overview, Site Optimizer, or Traffic Controller tabs. This will empty the cache and we will create the cache again with the latest content. This has a minimal impact on overall performance and is perfectly safe to do.

# DNS Records Worksheet

Use this worksheet to create a record of what's in your DNS today. In case you need to roll back to your previous configuration, this information could be useful.

Nameservers

A Records

CNAMEs

MX Records

Other Records